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THE

PHYTOLOGIST.

A BOTANICAL JOURNAL.

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NORTHUMBERLAND BOTANY.

Botany of Hulne Park. By W. R., *Alnwick.*

Hulne Park, near Alnwick, in Northumberland, the magnificent demesne attached as pleasure grounds to Alnwick Castle, the princely seat of the Percies, Dukes of Northumberland, presents a wide diversity of scenery, with striking inequalities of surface, in one portion abounding in beautiful undulating meadows and gentle slopes, in others with rugged and lofty hills rising 800 feet above the level of the sea. It embraces a rich variety of objects of interest to the antiquarian, to the scientific naturalist, to the botanical student, and to the lover of the picturesque and beautiful. It is surrounded by a lofty park wall, and the contents within its enclosure are estimated at between three and four thousand acres, its circumference being upwards of twelve miles. The river Aln, crossed by numerous bridges of elegant rural designs, winds through the centre, forming a silvery thread, nearly dividing the park into north and south, its banks shaded and overhung with tastefully laid-out woodlands. Within the park may be found almost every variety of sylvan scenery, of hill and dale, from the rich perfection of modern cultivation to the romantic grandeur of the primitive mountain. The river margin decorated with a choice selection of evergreen and flowering shrubs; the lawns rejoicing in a luxuriant vegetation, and studded over with healthy forest trees; the higher sections covered with the dark green pine, or waving with the purple blossom of the heath and the golden glories of the gorse; the rude and immemorial grey crag, with weatherbeaten grandeur, in the loftier elevations, asserting its supremacy, and adding wildness and sublimity to the whole.

On the north bank of the river, embosomed in wood, stands Hulne Abbey, of Early English architecture, founded for the Order of Carmelite Friars about 1240, by the piety of William de Vesey, the lord of Alnwick of those days, and Richard Grey, a companion knight, two of the Crusaders whose chivalry had led them to the Holy Land, and who, on their return, had discovered in the chosen site for an abbey, a striking similitude to that of Mount Carmel in Palestine. Its towers are still in tolerable preservation, and form interesting objects of inspection to the researches of the mediævalist. On a lofty eminence on the opposite

BRITISH MUSEUM

side, stands Brizlee Tower, a composite column, ninety feet in height, finished in the highest and most elaborate style of masonry of the last century, and from whose summit, reached by an internal staircase, is obtained a prospect of extended and varied beauty. To the north-west and between the openings of the Cheviot range, the visitor catches a glimpse of the blue hills of pleasant Teviotdale, in Scotland. To the east, spread out before his eye, lies a landscape teeming with all the wealth of cultivation, bounded by the coast-line, marked by ancient castles and ruined keeps; and further still the wide expanse of the German Ocean. To the south, his vision is carried on to the fells of the county of Durham. Nearly two miles further down, on a pleasant haugh, formed by a bend in the river, stand the remains of Alnwick Abbey, another monastic establishment, founded about 1147, by Eustace Fitz-John, for Premonstratensian Canons, of which all now left is the gate-tower, appropriated to the residence of one of the keepers, and on the beautiful lawn in front the Alnwick Horticultural and Botanical Society hold their annual Exhibitions.

The soil of the park, resting upon the sandstone, is not so rich in rare plants, as from the inequality of its surface the inquiring botanist might be led to anticipate. It abounds with several species which are clearly not indigenous, but appear to be legacies bequeathed to the district by the inmates of the religious establishments, and who were expelled during the reign of our eighth Henry, and from their long cultivation have in a great measure become naturalized. Among these may be named the *Euphorbia Esula*, which is found in abundance on the walls of Hulne Abbey; the *Corydalis solida* is another instance, and several others might be named in different parts of the immediate neighbourhood.

I may add, that, the Duke of Northumberland, the noble owner of the grounds, with that generosity and consideration which distinguish his character, throws his parks open to the public two days in the week throughout the year, when they are accessible to all, from noon to sunset, throughout the summer. And the Castle, garden, and parks, are open at all times to pleasure-parties from all quarters, on simply applying for a pass at the Castle offices.

The Flora of this part of the country is very attractive. To commence, near Alnwick Abbey, on the banks of the Aln, not

far from the town of Alnwick, there is a locality for *Helleborus viridis;* not a common plant in any part of the British Isles. This station is rather too well known, and the roots are frequently dug up and carried off; and at present (April, 1861) there is but little of it to be taken. It is an ancient and still popular remedy in the pharmacopœia of the cow-leech (see 'Phytologist' for May, 1861). Dr. Turner, in his "Herball," writes, "Dyuerse husbandmen used to put the roote of Berefoot into beastes eares, and called the putting in syterynge of beastes, and in sume places called the herbe Syterwurte." This practice is not unknown in modern days in other parts of the kingdom.

Viola odorata occurs a little further up the riverside; and east of the old lodge, *Corydalis solida* is found in abundance, associated with a few plants of *Pulmonaria officinalis*. The latter plant is believed to be an introduction; the former one has all the appearances of being in its natural habitat.

By the sides of the drive that intersects this part of the ducal domain, there are numerous patches of *Chrysosplenium oppositifolium* and *C. alternifolium*, both of them in perfection at this time (May 8th, 1861); *Polygonum Bistorta* abounds in the same locality.

On the west side of the old lodge, in a plantation a few yards from the drive, *Lycopodium clavatum* grows; and in an open space further on towards the deer-park, *Ophioglossum vulgatum* and *Hieracium aurantiacum* are found. Of the latter there is plenty; but perfect specimens are rarely found, as the grass is often mown before the flowering of the plant. This last-named species also occurs in some other parts of Scotland, but not without a suspicion of the probability of its having been introduced at some period not very remote.

Paris quadrifolia and *Epipactis latifolia* are found in many parts of the park, and in none more plentifully than in woods near the old house.

The plants on and about the ruined remains of Hulne Abbey are the following, and it may be observed that, in the language of modern botany, they are mostly introductions or suspected aliens; for in botany no period of time, however long, gives to certain species the privileges of nationality.

Hesperis matronalis grows, but sparingly, close to the drive; in a plantation on the opposite side of the road, *Lathræa squamaria*

and *Arum maculatum* are plentiful. Neither of the two latter mentioned have ever been branded as foreigners in England.

On the abbey walls *Euphorbia Esula* is plentiful, associated with a genuine native, viz. *Polypodium vulgare*. Most botanists presume that the *Euphorbia* is an escape from the garden of the Carmelite friars; but if so, it is pretty well naturalized by this time, for the holy brotherhood was dispersed and their establishment dissolved in the reign of Henry VIII., now more than three centuries ago.

The other mural plants growing on these ruins are as follow, viz.:—*Cheiranthus Cheiri, Echium vulgare, Valeriana rubra, Parietaria officinalis, Pyrethrum Parthenium, Arabis hirsuta, Cardamine sylvatica, C. hirsuta, Vinca major, Linaria Cymbalaria, Asplenium Trichomanes, Lithospermum officinale, Chelidonium majus, Hieracium sylvatica, Draba verna, Sedum acre, Linaria vulgaris, Arenaria trinervis*, etc. [We wish our correspondent would look for *Arenaria balearica*, which as yet has been observed only in two localities in the British Isles, viz. in the counties of Perth and in Wilts: see 'Phytologist' for April, 1861, p. 127.]

Brizlee Hill is literally, or rather, botanically, covered with *Trientalis europæa*; and in the leafy month of June, it is a spot well worth visiting; for such a profusion of these fine plants in bloom, as is afforded in this locality, is a sight of not very frequent occurrence. *Vaccinium Vitis-idæa* and *Empetrum nigrum, Pyrola minor, Juniperus communis*, etc., abound on the said elevation.

Ferns are plentiful in the woods, and in various parts of the park, though none of them are of great rarity. The most interesting species are *Polypodium Phegopteris, P. Dryopteris*, at the base of the hill; on the north side, *Lastrea Oreopteris, L. dilatata*, and *L. Filix-mas* are abundant. *Athyrium Filix-fœmina* occurs everywhere in some one or other of its varied and beautiful forms. *Scolopendrium vulgare* grows on a wall near Hulne Abbey. *Polystichum aculeatum* grows in Blackbog Dean, and *Pteris aquilina* and *Blechnum boreale* all over the woods.

A few plants of *Lastrea Filix-mas*, var. *incisa*, are occasionally to be observed.

Rugley Wood, about two miles from Alnwick, produces the following rarities, viz.:—*Gagea lutea* by the burnside, but not in

great quantity, only two small patches. It has suffered much from the rapacity of greedy collectors, who were not contented to get the flowers and foliage, but who must needs dig up the roots. This spring (1861) I was pleased to see that it had somewhat recovered from the ravages of these spoliators.

Crepis succisæfolia is another of the rare denizens of Rugley Wood. It grows but sparingly, on the west of the road. [Surely this is a "sufficiently exact record of *one* of its localities," and the authority is unimpeachable. The specimen, or one of the specimens, collected there, is in our possession. We have also seen it at Stainforth Force, near Settle.]

Carduus heterophyllus is abundant by the burnside, and *Trollius europæus* and *Paris quadrifolia* are plentiful on the east side of the wood.

Kyloe Crags is a locality about an hour's walk from Beal station, on the North-eastern Railway, and is a basaltic range of rocks, extending north and south, passing westward with a rugged irregular point. Here *Convallaria Polygonatum* was first discovered by Mr. A. Price, at a date which cannot be *now* satisfactorily ascertained. It was first made known in the 'English Flora' (1824), and was subsequently lost sight of till 1849, when it was re-discovered by four members of the Berwickshire Naturalists' club, and published in their Transactions.*

The laudable prudence of the Club did not long preserve the locality as a profound secret; for about five years ago I and three other plant-fanciers visited Kyloe Crags, where, after searching a whole day, we discovered three fresh localities, besides the one found by the Club. We found *Asplenium septentrionale* to be very scarce, *Adiantum nigrum* and *A. Trichomanes* in abundance. *Euonymus europæus*, *Arabis thaliana*, and *Thalictrum minus* are also found on these crags.

In Newnham loch, a little way from Newnham station, *Ranun-*

* "Leaving the shore we directed our steps to Kyloe Crags, with a hope that another investigation might be rewarded by the discovery of the oft-sought-for *Convallaria Polygonatum*, and the 'wandering botanist' can only appreciate the feeling of delight that rushed across our mind when we held the long-desired treasure in our grasp. Confined to one place, it was there plentiful and in full flower. To point out the exact spot would be to ensure its destruction, as has already happened to another rare tenant of these crags, the *Asplenium septentrionale*, and that chiefly through the instrumentality of one who calls himself a botanist, and a member of a similar Club to our own."

culus Lingua grows in bogs which surround the loch. The other rare species here are *Pyrola rotundifolia, Scutellaria galericulata, Lycopus europæus, Typha latifolia*, etc.; but recent drainage has caused some of these to disappear.

Note.—Sisymbrium Irio still grows on the wall of Berwick, but most abundant at the pier gate.

ADDENDA TO THE FLORA OF HARROW.

About twelve months ago we presented our readers with a list of plants occurring in a wild state in the neighbourhood of Harrow. Since that time we have been enabled to add considerably to our own knowledge of the local Flora, and proceed to lay the results before the public. About 151 Flowering Plants, 5 Ferns, 3 Horsetails, and 3 *Charæ* have been discovered. Some little way has also been made towards preparing a list of the Mosses, *Hepaticæ*, Lichens, and Fungi of the district. This result is owing partly to the extending of our search over a wider field, and partly to a closer examination of the same ground searched last year. The localities in which the plants have been found, and which are indicated by abbreviations in the last column of the list, are as follows:—Alperton, A.; Eastcot, E.; Greenford, Gf.; Harrow, H.; Harrow Weald, HW.; Northolt, N.; Oxhey, Ox.; Pinner, P.; Roxeth, R.; Ruislip, Rp.; Stanmore, S.; Wembley, W.; and Wood End, WE.

Our Harrow Flora now assumes a respectable appearance, containing in all, of Flowering Plants, Fern Allies, and *Charæ*, 539 species and varieties, comprised in 260 genera and 73 families. We hope that this list may, by further research, be considerably enlarged. As it is, after deducting a few plants that occur by merest accident, the remainder is sufficiently large to enable us to withdraw the depreciating remarks made last year in reference to the Flora of this neighbourhood. An extensive Flora could not be expected in an inland district, of small extent, nearly all under grass, and having very little variety of soil. Under these circumstances, and considering how large a portion of the neighbourhood has never been searched at all, we feel gratified that the results of occasional walks, within a term of two years, should have proved so satisfactory. Our Flora is large enough to afford

us full proof of the creative wisdom of our Heavenly Father, and to exhibit to us His tender care in providing for the wants of his people. Let us not be slow to learn the lesson of trust in His gracious providence and love, which the flowers of the field, so simply and yet so eloquently, teach.

Family.	*Genus and Species.*	*Habitat.*	*Locality*
Ranunculaceæ.	Clematis Vitalba, *L.*	Hedges.	P.
	Ranunculus heterophyllus, *Fr.*	Pools.	R.
	„ peltatus, *Fr.*	„	R.
	„ Flammula, *L.*	Common	HW.
Papaveraceæ.	Papaver Lecoquii, *Lamotte.*	Gardens	R.
	„ Rhœas, *L.*	Waste	H.
	„ somniferum, *L.*	„	H.
Cruciferæ.	Coronopus Ruellii, *Gært.*	Roadsides	H.
	*Lepidium sativum, *L.*	Cornfields	R.
	Cardamine sylvatica, *Link?*	Woods	A.
	Arabis thaliana, *L.*	Old walls	RP.
	Barbarea præcox, *Br.*	Gardens	H.
	Erysimum cheiranthoides, *L.*	Cornfields	WR.
	*Sinapis alba, *L.*	Waste places	H.
Violaceæ.	Viola arvensis, *Mur.*	Cornfields	WR.
Droseraceæ.	Drosera rotundifolia, *L.*	Common	HW.
Caryophyllaceæ.	Lychnis Githago, *Lam.*	Cornfields	WR.
	Sagina apetala, *L.*	Old walls	H.
	Spergularia rubra, *St. Hil.*	New churchyard	H.
	Stellaria uliginosa, *Mur.*	Ditches	HW.
Linaceæ.	*Linum usitatissimum, *L.*	Roadside, etc.	H.
	Linum catharticum, *L.*	Common	HW.
Malvaceæ.	Malva moschata, *L.*	Roadside	P.
Hypericaceæ.	Hypericum humifusum, *L.*	Common	HW.
	„ pulchrum, *L.*	„	HW.
	„ calycinum, *L.*	Hedge-bank	H.
Geraniaceæ.	*Geranium rotundifolium, *L.*	Garden	H.
Oxalidaceæ.	Oxalis Acetosella, *L.*	Woods	P.
Leguminiferæ.	Spartium scoparium, *L.*	Common	HW.
	Genista tinctoria, *L.*	„	HW.
	„ anglica, *L.*	„	HW.
	Melilotus officinalis, *Willd.*	Wayside	N.
	Trifolium medium, *L.*	„	OX.
	„ procumbens, *L.*	Cornfield	WR.
	Ornithopus perpusillus, *L.*	Common	HW.
	Vicia Cracca, *L.*	Meadows	P.
	„ lathyroides, *L.?*	Waste	RP.
	„ gracilis, *Lois.?*	Meadows	R.
	Orobus tenuifolius, *Roth.*	Woods	P.
Rosaceæ.	Prunus domestica, *L.*	Hedges	R.

Family.	*Genus and Species.*	*Habitat.*	*Locality.*
Rosaceæ.	Prunus avium, *L.*	Copse	H.
	Rubus nitidus, *Salt.*	Common	HW.
	„ pygmæus, *Weihe.*	Edge of wood	OX.
	„ Lejeunii, *Weihe.*	„	OX.
	„ Balfourianus, *Blox.*	Hedges	WE.
	Rosa tomentosa, *Woods.*	„	E.
Onagraceæ.	Epilobium virgatum, *Fries.*	Ditches	H.
Haloragaceæ.	Callitriche platycarpa, *Kütz.*	„	HW.
Lythraceæ.	Lythrum Salicaria, *L.*	Canal	A.
	Peplis Portula, *L.*	Pools	HW.
Portulacaceæ.	Montia fontana, *L.*	Streams	HW.
Illecebraceæ.	*Polycarpon tetraphyllum, *L.*	Garden	H.
Scleranthaceæ.	Scleranthus annuus, *L.*	Cornfields	P.
Saxifragaceæ.	Saxifraga tridactylites, *L.*	Old walls	H.
Umbelliferæ.	Hydrocotyle vulgaris, *L.*	Common	HW.
	Sanicula europæa, *L.*	Wood	P.
	Helosciadium nodiflorum, *Koch.*	Streams	P.
Rubiaceæ.	Galium palustre, *L.*	Ditches	E.
	„ elongatum, *Pres.*	„	
Valerianaceæ.	Valeriana officinalis, *L.*	„	RP.
	Fedia dentata, *Bieb.*	Cornfields	RP.
Compositæ.	Tragopogon minor, *Fr.*	Meadows	WE.
	Apargia hispida, *Willd.*	„	A.
	Crepis virens, *L.*	„	P.
	Hieracium Pilosella, *L.*	Waysides	H.
	„ aurantiacum, *L.*	Old walls	H.
	„ vulgatum, *Fries.*	Common	HW.
	„ boreale, *Fries.*	„	HW.
	Arctium minus, *Schk.*	Banks	E.
	Serratula tinctoria, *L.*	Meadows	E.
	Carduus acaulis, *L.*	Common	RP.
	Artemisia vulgaris, *L.*	Banks	GF.
	Filago minima, *Fries.*	Common	HW.
	„ germanica, *L.*	Banks	E.
	Solidago Virgaurea, *L.*	Woods	P.
	Senecio sylvaticus, *L.*	Common	HW.
	„ Jacobæa, *L.*	Waysides	H.
	Anthemis Cotula, *L.*	„	H.
Campanulaceæ.	Campanula rotundifolia, *L.*	Common	HW.
Apocynaceæ.	*Vinca major, *L.*	Waysides	OX.
Gentianaceæ.	Erythræa Centaurium, *Pers.*	Waysides	P.
Scrophulariaceæ.	Veronica scutellata, *L.*	Streams	HW.
	„ officinalis, *L.*	Common	HW.
	* „ peregrina, *L.*	„	H.
	Euphrasia officinalis, *L.*	„	HW.
	Melampyrum pratense, *L.*	Woods	P.
	Scrophularia aquatica, *L.*	Ditches	P.

Family.	*Genus and Species.*	*Habitat.*	*Locality.*
Scrophulariaceæ.	Linaria Cymbalaria, *Mill.*	Old walls	S.
	„ spuria, *Mill.*	Cornfields	P. & GP.
	„ Elatine, *Mill.*	„	P.
	„ vulgaris, *Mill.*	Banks	W.
Lamiaceæ.	Mentha viridis, *L.*	Canal bank	A.
	Origanum vulgare, *L.*	Banks	P.
	Thymus Chamædrys, *Fr.*	Common	HW.
	Calamintha Clinopodium, *Spen.*	Banks	HW.
	Teucrium Scorodonia, *L.*	Common	HW.
	Galeopsis Tetrahit, *L.*	Cornfields	R.
	„ versicolor, *Curt.*	„	H.
	Stachys Betonica, *Benth.*	Common	HW.
	Scutellaria minor, *L.*	„	HW.
Boraginaceæ.	*Borago officinalis, *L.*	Waste	H.
Primulaceæ.	Primula elatior, *Ang. plur.*	Garden	R.
	Lysimachia nemorum, *L.*	Woods	P.
Plantaginaceæ.	Plantago Coronopus, *L.*	Common	HW.
Polygonaceæ.	Polygonum amphibium, *L.*	Canal	GP.
	Rumex viridis, *Sibth.*	Woods	P.
Euphorbiaceæ.	*Euphorbia platyphylla, *L.*	Roadside	R.
Urticaceæ.	*Cannabis sativa, *L.*	Waste	A.
	Parietaria diffusa, *Koch.*	Church walls	P.
Amentiferæ.	Salix vitellina, *Sm.*	Pool in sandpit	P.
	Salix alba, *L.*	Hedges	H.
	Salix repens, *Eng. Bot.*	Common	HW.
	„ prostrata, *Eng. Bot.*	„	HW.
Liliaceæ.	Fritillaria Meleagris, *L.*	Meadows	P.
	Allium vineale, *L.*	„	R.
	„ compactum, *Thuil.*	„	R.
Alismaceæ.	Alisma lanceolatum, *With.*	Pools	A.
Fluviales.	Potamogeton pectinatus, *L.*	Canal	GP.
	„ oblongus, *Viv.*	Streams	HW.
Araceæ.	Typha angustifolia, *L.*	Pools	A.
Juncaceæ.	Juncus acutiflorus, *Ehrh.*	Common	HW.
	„ lamprocarpus, *Ehrh.*	„	HW.
	„ supinus, *Mœnch.*	„	HW.
	„ bufonius, *L.*	Roadsides	H.
	„ squarrosus, *L.*	Common	HW.
	Luzula sylvatica, *Bich.*	Woods	P.
	„ pilosus, *Willd.*	„	P.
	„ Forsteri, *DC.*	„	P.
Cyperaceæ.	Scirpus sylvaticus, *L.*	Canal	N.
	„ palustris, *L.*	Common	P.
	Carex stellulata, *Good.*	„	HW.
	„ ovalis, *Good.*	„	HW.
	„ vulgaris, *Fries.*	Meadows	H.
	„ flava, *L.*	Common	HW.

Family.	*Genus and Species.*	*Habitat.*	*Locality.*
Cyperaceæ.	Carex panicea, *L.*	Meadows	H.
	„ pendula, *Huds.*	Woods	P. & A.
	„ glauca, *Scop.*	Meadows	H.
	„ pilulifera, *L.*	Dry banks	OX.
Gramina.	Phalaris arundinacea, *L.*	Ditches	H.
	* „ canariensis, *L.*	Garden	H.
	Milium effusum, *L.*	Thickets	WE.
	Apera Spica-Venti, *Beauv.*	Roadside	R.
	Agrostis canina, *L.*	Common	HW.
	„ alba, *L.*	Meadows	H.
	Arundo Phragmites, *L.*	Pools	A.
	Aira flexuosa, *L.*	Common	HW.
	Arrhenatherum bulbosum, *Lindl.*	Dry brooks	OX.
	Triodia decumbens, *Beauv.*	Common	HW.
	Molinia cœrulea, *Mœnch.*	„	HW.
	Poa nemoralis, *L.*	Meadows	R.
	Bromus commutatus, *Schd.*	„	R.
	Lolium temulentum, *L.*	Waste	A.
	„ arvense, *With.*	Meadows	OX.
	Nardus stricta, *L.*	Common	HW.
Filices.	Lastrea spinulosa, *Presl.*	Woods	OX.
	„ * dilatata, *Presl.*	Common	HW.
	Asplenium Adiantum-nigrum, *L.*	Dry banks	HW.
	Blechnum boreale, *Sw.*	„	HW.
	„ anomalum	„	HW.
Equisetaceæ.	Equisetum sylvaticum, *L.*	Common	HW.
	„ palustre, *L.*	„	P.
	„ fluviatile, *Fries.*	„	P.
Characeæ.	Chara syncarpa, *Thwil.?*	Reservoir	RP.
	„ vulgaris, *Aut.*	Pools	R. & A.
	„ fragilis, *Desv.*	Reservoir	RP.

The remarks of "A." on "The List of Harrow Plants" reprinted from the 'Harrow Gazette' in the 'Phytologist' of April, 1860, certainly demand an answer, andan answer in keeping with the kind tone of his closing paragraph. The materials obtained during last summer for an "Addenda to the Flora of Harrow," made it desirable that the answer should be delayed until the first portion of the "Addenda" should be ready for publication. I have to thank "A.," in the first place, for pointing out several errors, into which I had inadvertently fallen; and which it was most desirable should be corrected. I further trust that the replies given below to his queries and criticisms may on the whole be deemed satisfactory. Be it remembered that the paper was originally drawn up for non-botanical readers;

that only one mark was used to indicate plants of doubtful origin; and that doubt was only expressed in the case of plants likely to have been purposely introduced, except in the case of the *Anacharis Alsinastrum*.

Corydalis lutea was originally printed with an asterisk, which was overlooked in the reprint. This small defect was counterbalanced by several original typographical errors corrected in the reprint.

Coronopus didyma was an error of memory, and, without reference to an authority, was set down as the name of the more common *C. Ruellii*.

Barbarea arcuata has been compared with a plant so labelled from Loughall, county of Armagh, A. G. More, and appears to be identical with it.

Sinapis nigra. Not found; set down in error.

Rosa villosa, I believe rightly named. Examples were distributed last year through the Thirsk Club.

Cratægus monogyna. Inserted only as a variety.

Ribes rubrum and *R. Grossularia*, apparently wild, but in a locality that admits of doubt. How can it be known, with respect to most plants, whether they are of truly spontaneous growth in any particular locality, or have been accidentally introduced?

Viburnum Opulus and *V. Lantana* occur in the neighbourhood, under very different conditions of locality, etc., giving to the latter every probability of spontaneous growth, and to the former no more than a bare possibility. *Hypericum hirsutum*, *Bryonia dioica*, *Plantago media*, and *Sison Amomum*, I have found plentifully in several neighbourhoods where the calcareous element in the soil is very small indeed.

Tragopogon porrifolius I do not consider indigenous. It was found last year in a new locality, but evidently of accidental growth.

Arctium. Very few plants of *Arctium* were found in flower in this neighbourhood in 1859, and those few all *A. majus*. Yet it appears from the search made last year that *A. minus* is the more common plant of the district.

Vinca minor. Found in a new locality last year; yet still of a doubt.

Verbascum Thapsus. Doubtful, though it occurs where it could not have been planted either for ornament or use.

Veronica Buxbaumii. Two new localities found for this. There was no intention to give this a higher claim to be considered indigenous than is accorded to it in our leading works.

Myosotis sylvatica. For the present I am willing to consider that this was put down in error. At the same time, I have a strong feeling that I must have seen this plant in 1859, but have not been able, so far, to verify this conviction.

Atriplex Babingtonii. A confessedly seaside species, yet occasionally occurring inland. In 1857, I found it plentifully between Kensal Green and Kilburn. Last year also I found it in this neighbourhood.

Atriplex patula, L., has been set down through mistake.

Fagus sylvatica seems to have some pretensions to be classed as indigenous.

The Rushes, Pondweeds, and Grasses were justly supposed to be few in number; but those only that had been observed could be inserted in the list. Important additions have been made to all these families; but the number of Pondweeds is still very small. "A." must have overlooked a statement made in the prefatory remarks to the "List of Harrow Plants," when he says that varieties have been made to "do duty for species." It was distinctly stated that the plants enumerated amounted to "three hundred and eighty-five species and varieties." There are several varieties mentioned in the "Addenda" without any distinctive mark attached, such not being requisite for the readers for whom the list has been specially prepared. I shall be glad to receive any remarks, either directly or through the pages of the 'Phytologist,' in reference to the "Addenda," that may enable me to make the "List of Harrow Plants" more perfect. And while I do not strongly object to any friendly critic preserving his incognito, if he desires; still, if not unpleasant to him, I should much prefer that he throw off his disguise and plainly show his colours. Had the List written last year been intended for the pages of the 'Phytologist,' it should have had my signature affixed, that its readers might be able to attach neither more nor less of authority to its statements than is their just due.

W. M. Hind.

Harrow, February 2, 1861.

FRITILLARIA AND CROW-FLOWERS.

Mr. C. J. Ashfield, in his remarks on the botany of the Chilterns, in the 'Phytologist' for April, 1861, notices the *Fritillaria Meleagris* (Fritillary, or Snake's-head), which grows abundantly in a field near to the hamlet of Ford, in the parish of Dinton, and is throughout the neighbourhood known by the name of *Crow-cup Field*. I wish to know something more about this plant, and particularly whether it is the one Chapman alludes to, in his 'Ovid's Banquet of Sense,' as

"*Cup-like Twill-plants*, strewed in Bacchus' bower."

I have for some time thought that the *Fritillaria* is the plant there alluded to, as it is termed "cup-like" as well as "twilled;" which words are descriptive of the shape of the flower, and the marking of its petals. I think also that the name Crow-cup Field, given to the field at Dinton where it so abundantly grows, favours my opinion. Respecting Crow-flowers generally, I am curious to know why so many of our common plants have the prefix *crow*. In Gerard's Herbal is the following:—

"Of *Crowfeet:* There be divers kinds of these pernicious herbs, comprehended under the name of Ranunculus, or Crowfoot, and the knowledge of them is as necessary to the physician as any other herbs, to the end they may shun the same, as Scribonius Largus saith." He then gives,—common Crowfoot, right Crowfoot, Crowfoot of the fallow field, white Mountain Crowfoot, round-rooted Crowfoot, Crowfoot called *Auricomus* Golden-hair Crowfoot, Frog Crowfoot, grassy Crowfoot, winter Crowfoot, Portugal Crowfoot, Locke's Gowlons, or globe Crowfoot, and several others, which are all called Ranunculus. He also notices Crow-flowers, or Wild Williams, called in Latin *Armoracia sylvestris;* Crowfoot, Crane's-bill, Crow Garlic, Crow-toes, Hyacinths, and yellow Crow-bells.*

In Halliwell's 'Dictionary of Archaic and Provincial Words, he has Crowberry (*Empetrum nigrum*), Crow Leek (Hyacinth), Crow Parsnip (Dandelion), Crow's-nest (wild Parsley), Crow

* "The Crow Garlic," says Coles, in his 'Adam in Eden,' "groweth in fertile pastures in all parts of England, particularly in a field called the *Mantels*, on the back side of Islington, by London." If these plants take their names from the shape of the bird's foot, what part of them is so shaped?

sope (the herb *Saponaria*), Crow-toe (the *Ranunculus*), and Crow-bell, to which is the following interesting note from Aubrey's 'Wilts Royal Society MSS.,' p. 126:—

"In a ground of mine called Swices, growes abundantly a plant called by the people hereabout Crow-bells, which I never saw anywhere but there. Mr. Robert Good, M.A., tells me that these Crow-bells have blew flowers, and are common in many shady places in this countrey."

These Crow-bells must be, I conclude, the same flowers as we call Hare-bells (*Hyacinthus nonscriptus*), and they may be the same as the Crow-toes of Gerard. But I remember Milton, in 'Lycidas,' speaks of "tufted Crow-toes:" does he mean by these the Hyacinth? Shakspeare, in 'Hamlet,' act iv. sc. 7, speaks of "Crow-flowers" in connection with Nettles and Daisies, with which Ophelia made her fantastic garlands. These appear to me to be some of the *Ranunculus* or Crowfoot tribe.

SIDNEY BEISLY.

KENTISH BOTANY.

Plants of Ham, Pegwell Bay, Sandown Castle, Oldhaven, Sandwich, etc.

Next morning, (see 'Phytologist' for June, 1861, p. 185,) the 5th, before breakfast, we went to Ham, to botanize about its celebrated ponds. But ponds we saw none, though of deep water-ditches plenty.

The distance from Sandwich to Ham is under two miles, and the way is by the Deal road, turning off to the right about a mile from the former town. On our way we met with *Pimpinella magna*, not very plentiful, and with *Crepis biennis*, most luxuriant and in great abundance.

This fine plant, which is still occasionally confounded with *Crepis taraxacifolia*, is common in many parts of Kent, particularly about the roadside between Gravesend and Rochester, and in the fields near the path from Cobham to Halling. It is also plentiful about Sevenoaks. But nowhere is it more abundant than on the roadsides near Ham. Here it varies much in size, and in the shapes and divisions of the leaves. Its height is from

two to six feet; the stem-leaves are sometimes *all* quite simple, sometimes they are pinnatifid, with lobes three or four inches long. The plant is now pretty well distinguished from *C. taraxacifolia*, but its distribution is still but indifferently established.

In the 'Cybele' the area of *C. biennis* is entered 6; this means that it has been observed in 6 out of the 18 botanical provinces; and the county census is 10, or it has been seen in 10 counties. In the same work, *C. taraxacifolia* is entered as having a provincial extent of 4, and its comital figure is 8. On comparing notes we found that *C. taraxacifolia* has a greater area than *C. biennis;* we have specimens of the former from Surrey and from Warwickshire or Leicestershire, of the latter we have examples from Kent only. It is certain that these two plants were confounded and mislabelled in the herbarium of the Botanical Society of London, as they were in the 'English Flora,' and in 'English Botany,' both in the original work and in the Supplement.

A correct figure of *C. biennis* is still a *desiderata* in our illustrated Floras. Those who wish to get a better acquaintance with these two species, and to ascertain their distinctive characters, may easily accomplish this in a short visit to Kent.

About the Erith station, *C. taraxacifolia* is unusually abundant, and in a chalk-quarry near the Rosherville Gardens at Northfleet the other species grows. The finest, however, and the most multiform examples of *C. biennis* is near Ham.

On reaching the low meadowy lands, where, as already said, we saw no ponds, we turned to the right, into a boggy peaty field, which was full of *Hydrocotyle vulgaris,—Salix adscendens* of 'English Botany,'—with several large and small trees of *Populus nigra*. This being unsatisfactory, we entered another enclosure, on the opposite or left-hand side of the road, and in the ditches here saw plenty of *Hottonia palustris* still in flower (5th September); also further on towards the wood or copse at the further end of the meadow, *Chara hispida* and *C. vulgaris*, and *Sparganium natans* (in flower), *Alisma ranunculoides*, *Lemna trisulca*, *Potamogeton plantagineus*, and other commoner aquatic plants were here seen in abundance.

In the wood there were gigantic specimens of *Rubus idæus*, equalling in length *R. fruticosus*, if this name be admissible; also *Lastrea Thelypteris*, at least four feet in height; *Carex paniculata*, the leaves of which rivalled those of the far-famed Pampas grass.

Lysimachia vulgaris was very luxuriant, and so was *Menyanthes trifoliata*, of course long past flowering. The other plants observed were *Valeriana dioica*, *Sparganium simplex*, and *Triglochin palustre*, with others of less note. This was a pretty fair amount of work done before breakfast.

After refreshment we started for Pegwell Bay, celebrated among gastronomical enthusiasts for its shrimps and shrimp sauce, brown bread and fresh butter, etc. We saw no specimens of either fish or sauce, but we saw what pleased us much more, viz. myriads of *Medicago minima* and *Trifolium scabrum*. The herbage of the gravelly parts of these flats is chiefly composed of these pigmy Leguminifers, with abundance of *Phleum arenarium* and *Erigeron acris* intermixed. In lower and moister places appeared *Erythræa pulchella*, varying from a couple of inches to a foot in height; also *Samolus Valerandi* and *Spergula nodosa*.

Nearer the river appeared *Artemisia maritima*, with a variety which does not agree with *A. gallica* found on the shores of the Mediterranean; also *Suæda (Schoberia) maritima*, if this be its now current name. (In books it has at least as many aliases as an Old Bailey bird, or a grandee of the highest rank in Spain.) *Statice Armeria*, *Glaux maritima*, *Atriplex portulacoides*, *Triglochin maritimum*, and *Œnanthe Lachenalii** abounded.

This latter plant is found plentifully dispersed over miles of these salt-marshes. *Psamma arenaria* and *Medicago denticulata* of the Rev. G. E. Smith, abounded on the drier parts, while many acres of mud-flats were covered with *Salicornia herbacea*. In Norfolk, land is worth fencing off from the sea, when this plant grows on the muddy shores.

After reaching the mouth of the river which flows into Pegwell Bay, we turned back towards Sandwich, in order to go along the seashore to Deal, and as we did not want to go through the town, we ferried across the river, and directed our course toward the houses of the coastguard on the sand-hills, which here form a natural sea-wall.

* This species, the name of which only is one of our recent acquisitions, has usually a preference for maritime localities; yet we have received specimens from near Ross, at least forty miles from the sea and twenty from a tidal river.

In the Kentish locality it varies in size from a few inches to a yard in height. We have examples from the Ross station, of the dwarf state of the plant, where its small stature is not so easily accounted for, as on the sandy beach of Pegwell Bay, where its stunted growth is attributable to the sandy soil where it grows.

All along on the brink of the river, and especially on the margin of the ditches inside the river-wall, large masses of *Juncus acutus* appeared at intervals, a welcome sight to inland botanists. When passing over the meadow, and not far from the houses of the coastguard above mentioned, we were so fortunate as to light upon several fine specimens of *Polypogon monspeliensis*, a plant unrecorded in the list of the plants of South Kent. Is this a recent importation?

We had now reached the famous sandhills which lie between Sandwich and Deal, along which we were told was a painful and very dreary walk. It happily proved most agreeable, interesting, and instructive to us.*

On the sand appeared *Eryngium maritimum*, one of the most attractive of our seaside plants, not to handle, but to look at and admire.

It is very much to be wished that decorative artists, those who devise and execute the patterns for our paper-hangings, our draperies, furniture, and such-like, would now and then take a walk by the seashore and study the multifarious forms exhibited by our maritime vegetation. This would probably improve their taste; at the very least, it would have a tendency to enlarge their minds, and ultimately be the means of introducing more variety into their productions.

The Rose and the Convolvulus, the Trefoil and the Lily, are all beautiful, but they are repeated till they become tiresome. *Toujours perdrix*, said the facetious Frenchman, *mais toujours perdrix*. Too much of one dish palls the appetite; the constant

* Johnson's notice of the results of herborizing in this locality, viz. the sandhills about Sandown Castle, should not be passed over in silence. His list of plants seen in this locality is very brief. See Ralph's edition, 4to, 1847, pp. 25, 26:—*Malva vulgaris floribus albis; Anagallis aquatica*, 3 Lobel; *Cotyledon aquatica, seu Acris septentrionalium*, Lob.; *Buglossum sylvestre*, Dod.; *Tithymalus Paralius*. The cultivated specimens are omitted.

We saw no marine monsters of any sort, not so much as a sea-serpent; yet we are curious about the snake fifteen feet long, formerly killed here, the stuffed skin of which was in the possession of Charles Duke or Duck (Carolus Anas), the learned pharmacist of Sandwich.

This fine specimen of a sea-snake was as thick as a boa constrictor, and it contained in its capacious stomach a large portion of the population of the rabbit-warren. Are there any notices of the capture of this marine monster extant in any of our local histories of South Kent?

repetition of the finest poetry, music, or artistic embellishment, renders the object not only incapable of yielding pleasure, but it finally becomes disgustingly tiresome.

As a variety the artist might copy the leaves, the bracts, the heads, and even the stem of the Eryngo, or Sea-holly. If he be skilful in the art of adaptation, he might make his own fortune and ameliorate the taste of his countrymen at the same time.

On the sand wetted by the spray, if not by the tide, *Honkenya peploides* and *Salsola Kali* grew sparingly, and on the dry sand-hills, *Hypochæris glabra* and *Silene conica*, the former plentiful, and the latter sparingly. Three or four patches were all that appeared in our way between the preventive-houses and Sandown Castle. *Carex arenaria* and *Triticum junceum* were not unfrequent, *Phleum arenarium* was very common; *Erythræa pulchella* and *Carlina vulgaris* were far from scarce; *Convolvulus Soldanella* appeared only here and there; and very few specimens were in flower at this late period of the season.

We passed by Sandown Castle after looking into that desolate-looking fortress, and went over the hills straightforward to the old haven of Sandwich, which has been for generations and centuries choked up by the encroachments of the Goodwin Sands. Sandwich then had a direct communication with the sea: its roadstead or nagivable river is now very circuitous.

It is not very easy to believe the alleged connection between Tenterden Steeple and the Goodwin Sands; but it is far more incredible that the river Stour left its ancient direct channel between Sandwich and the sea, and made for itself a way, thrice as long, through the meadows.

Literary antiquarians have proved, at least to their own satisfaction, that the alleged connection between the silting of Sandwich harbour and the building of Tenterden steeple is well founded. Bishop Latimer, in his quaint, homely style, while preaching, related to his audience a story on which this tradition and proverb are founded. The Bishop said that a commissioner, Mr. Moore, was sent by the government to inquire into the cause of the stoppage of Sandwich Haven by the Goodwin Sands. After he had examined many people, and had heard their opinions about the cause and its remedy, he spied in court an old man, a very old man, much older than any of those who had given evidence on this subject.

The old man volunteered to say something, and his testimony was to the effect that Tenterden steeple had caused the choking of the former channel.

The old man stated that when he was a youth, he had heard this from men who were then very old, and they said that Tenterden steeple was the cause of the obstruction and abandonment of the ancient haven of Sandwich. The old man's evidence was abruptly ended by a shout of derisive laughter, and he retired abashed: and hence the saying is employed, as the learned Ray informs us, when an absurd or ridiculous reason is assigned for something in question.

The historian Fuller both quaintly and truly remarks on this, saying "that one story is good till another is told, and though this be all whereupon this proverb is generally grounded, I met since," says he, "with a supplement thereunto; it is this:—Time out of mind, money was constantly collected out of this county to fence the east banks thereof against the irruption of the sea, and such sums were deposited in the hands of the Bishop of Rochester. But because the sea had been quiet for many years without any encroaching, the Bishop commuted (diverted) this money to the building a steeple and endowing a church at Tenterden. By this diversion of the collection for the maintenance of the banks, the sea afterwards brake in upon Goodwin's sands. And now the old man had told a rational tale, had he found but the due favour to finish it. And thus, sometimes, that is causelessly accounted ignorance of the speaker, which is nothing but impatience in the auditors, unwilling to attend to the end of the discourse."

What truth there may be in this traditionary and local saw of the county, the narrator of the anecdote will not attempt to clear up, but he can state with much confidence that the same physical causes which have diverted the course of the river Stour at Sandwich, so far from what probably was its direct and ancient course to the sea, are still in operation; and every year is increasing the distance of the mouth of the harbour from the town of Sandwich. On the western side of the river's mouth, there is forming a mud-bank covered with Saltwort, as before said, and on the east side the water is gradually encroaching on the land. This process will continue, if the natural cause or agent is not counteracted, to produce still greater effects, and the mouth of

the river Stour will reach the chalk-bound eastern side of Pegwell Bay, and the mouth of Sandwich Haven will be removed several miles further from the town.

Many years ago,—nearly half a century,—the writer of the above remarks was informed that the river Cowie in Kincardineshire, which flows into the bay of Stonehaven by a channel which is, for about a mile, parallel with the sea-line (the river is on one side of a shingly beach and the sea is on the other), flowed straight to the ocean from the mill and bridge, which are both at the east entrance to the town. This account, now a tradition, is confirmed by a very excellent map of the above-named county, made from a survey completed in 1774. In this map the two rivers which flow into this bay, are represented as at least a mile or two apart, whereas in 1820, and probably still, the rivers Cowie, on the east, and Carron, on the west, were only a few yards distant where they entered the sea, in fact, no more than the breadth of the jetty or landing-place of the harbour. What took place within the memory of living witnesses, may have taken place in times long past, although the testimony of the occurrence is but traditionary.

When we reached the old haven of Sandwich, our thoughts were not engaged on any such physical speculations; for we had never previously seen so many and so fine examples of *Ranunculus Lingua*, and consequently our delight and admiration were fixed on the present gratifying show of fine and rare plants, and there were no regrets expressed at the departed glory of Sandwich and its once busy haven: we only regretted that we were not here a few weeks earlier in the season. And we were not sorry that we were not here, and spectators of the desperate sea-fight fought in this roadstead in 1046, when "Lothen and Irling came with twenty-five ships to Sandwich, and there took unspeakable booty in men, in gold, and in silver, so that no man knew how much it all was."

Sandwich and its haven have doubtless a history worth relating if the materials be forthcoming. Its name frequently occurs in the Saxon Chronicle, and it was the scene of many battles. As early as 851, King Athelstan fought on shipboard and slew a great number of the enemy (the Danes), took nine ships, and put the others to flight. We are content to be the chroniclers of humbler objects, and relate that the great and lesser Spearwort,

the Yellow Flag, the Bulrush, the Marestail, and the great Water Dock, now fill up the narrow space where kings contended, not for glory, but for spoil, like the ancient Greeks. *Sic transit gloria mundi.* Here we were not unobservant of preparations for a warlike struggle, which we hope will never come: but this is not the place for such inferences or anticipations.*

On our way along the sandhills from Sandown Castle to Deal, we collected here and there the following plants, viz.—*Allium vineale, Carduus tenuiflorus, Sclerochloe distans; S. maritima,* long past flowering; *Scabiosa Columbaria,* a considerable distance from the chalk; *Chenopodium olidum,* near Deal; *Polygala depressa,* Wend.; *Juncus cœnosus,* perhaps *Carex lævigata,* and *Hippophae rhamnoides* in fruit.

This we fancied might be the rare plant which our worthy (jocular?) host at Sandwich foretold that we might find if we had any luck; or if we were as lucky as a party of fifty botanists, who were at his house some twelve months ago, were. He very modestly told us that he was no botanist, and therefore could neither tell us the name of the plant nor give a very characteristic description of it; but he said it was a shrub, and grew on the sandhills, and produced a poisonous berry; also that a single leaf of the plant, if infused in a gallon of water, would render the infusion so poisonous, that a small portion would render our deadliest foes perfectly innocuous. This reminded us of Hector Boece's story of the Scottish king Duncan Macbeth, and Sweno, the leader of the Northmen. It is alleged by the historian that the latter chief and his army were drugged and hocussed with a decoction of *Atropa Belladonna,* which the Scots administered in ale and wine. There is probably quite as much truth in this story (see 'Gentleman's Magazine' for July, 1859) as there is in that of our host of the 'Bell' in Sandwich.

* The indulgence of solemn reflections on the altered state of Sandwich haven, and on the contrast between the past and present condition of the kingdom, would not make our readers much wiser. They are too much engaged with the realities of active life, to have much sympathy either with the reminiscences of the past or with anxious forebodings about the future.

We were well satisfied with what we saw, and wish our readers may have as much enjoyment as we had when they visit Sandwich.

BOTANY OF THE RED RIVER.

Extracts from a Paper read before the Botanical Society of Canada, bearing the following title:—On the Botany of the Red River Settlement and the Old Red River Trail. By JOHN C. SCHULTZ. (*Read 11th January*, 1861.)

"The Red River Settlement of late years attracted much attention in Canada, on account of its isolated position and the many and vague reports that were in circulation regarding it, some describing it as a land of milk and honey, and others as a cold barren waste. But little was known of the real resources of the country till the years 1857 and 1858, when the attention of our Government was directed to it, and they ordered two expeditions to be fitted out, one under the charge of Mr. Hind, and the other under Mr. Dawson. These gentlemen, on their return, after an absence of eighteen months, submitted their reports, accompanied by maps and a geological description of the country traversed. These were published and widely distributed, and many of you, no doubt, have seen them. Therefore any account that I give of the settlement will be as short as possible.

"It is situated on the Red River, near its entrance into Lake Winnepeg, occupying both banks of the Red River and the Assiniboine, which empties into the Red River at the Hudson's Bay Company's post Fort Garry, the centre of the settlement. The settlement extends from the mouth of the Red River up about forty miles, and on the Assiniboine river about twenty miles. The distance of the settlement from St. Paul is said to be six hundred miles, and from Lake Superior about three hundred. The population is estimated (rather high, I think) at ten thousand, including the roving population, who live altogether by hunting. The climate resembles that of Montreal in the length and continued cold of the winters, and the rapid vegetation in the spring after the snow is off the ground. All the cereals are raised in abundance, the average produce to the acre exceeding that of Canada. Garden vegetables are also grown in abundance. Indian corn, however, is not so successful, being nipped by the early frosts.

"While residing last summer at Fort Garry, (the Hudson's Bay Company's post in the settlement,) I had an opportunity of collecting specimens of plants, some of which are now exhibited to the

Society. From want of the necessary material, they were rather imperfectly prepared, but may perhaps serve to give a general idea of the botany of the immediate vicinity of the Fort. On referring to the list it will be observed that here, as in other prairie land, the richest family is the *Compositæ*, many species of which are found. At the Fort we have not only the ordinary prairie Composites, but a great abundance of such plants as *Artemisia Absinthium*, especially on the drier and higher parts. Next in frequency come the *Cruciferæ*, which generally follow man; these are abundant in the immediate vicinity of the Fort. There are many species of *Rosaceæ* and *Leguminosæ*, truly indigenous; *Umbelliferæ* are not unfrequent, and we have interesting representatives of *Ranunculaceæ*, *Xanthoxylaceæ*, *Violaceæ*, *Balsaminaceæ*, *Caprifoliaceæ*, *Rubiaceæ*, etc. The timber trees near the Fort are small groves of Aspen and Balsam Poplar, and on the banks of the rivers, Oak, Ash, Elm, Maple, Aspen, and Balsam Poplar."

The author graphically describes his journey, which abounded in adventures, dangers, and other excitements, observing the zoology as well as the botany of the trail, as it is called, between the settlement and Canada. At Detroit Lake he met with a party of Ojibway Indians, with whom our traveller and his company exchanged tea, tobacco, etc., for fish, which the Red-men caught in great abundance.

"After leaving the lake," he proceeds, "the trail passes through many miles of dense woods, consisting chiefly of Oak and other hard woods. In these woods, and southward, is found the Ginseng (*Aralia quinquefolia*) [? *Panax quinquefolium*, L.]. Crossing Otter-tail River, Rush Lake, and some small streams, we finally arrived at civilization again, in the shape of a collection of a dozen of houses, named in Minnesota maps Otter-tail City, and inhabited by travellers who purchase the furs of the Chippeways. After taking dinner here at a two-roomed hotel, for which we paid two dollars, we left the city and crossed Leaf Mountain, the heights of land or apex of the two great watersheds of the Red and Mississippi valleys. Here, as on the rest of the route, the prevailing timber was Pine and Spruce, with occasional Tamarac swamps. The trail here followed down the course of Leaf River till it empties into the Crow-wing River. Here the trail ended, and, crossing this river in a scow, we had now a

bridged road forty-five miles to the little town of Crow-wing, where we arrived on the 2nd of November, completing a trip of something over four hundred miles in fifteen days. At this place we left our horses, and took stages, a hundred and fifty miles, to the city of St. Paul, and from thence by Mississippi boat and railroad to Canada.

"I may mention here that in St. Paul I noticed several barrels of ginseng-root which had been collected by Indians and others, and was intended for export from New York or elsewhere to China. This American Ginseng is the *Aralia quinquefolia*, a different species, it is believed, from the Chinese one, but nevertheless highly esteemed in that country. It is said to be used there as a medicine in cases of debility, but its medicinal properties are not so highly esteemed in this country. Its uses in China must be very extensive, as, independent of the Ginseng obtained in China, and the enormous quantities exported from America, imports are registered at Shanghai of the enormous quantity of 55,000 catties, from the 11th November, 1858, to 30th June, 1859. This root is found in abundance in the western part of Minnesota, principally in the woods on Oak ridges, and there are persons who make large sums by collecting it and selling at St. Paul for one dollar per pound; by sending it to New York, they get a much larger price. Now as this root is so valuable, and as the climate and soil in some parts of Canada resemble that of Minnesota, I wish merely to mention the possibility of cultivating it in Canada. Hitherto the market has been supplied by indigenous growth, and the consequent disappearance of the plant in many parts of Canada and the States, suggests the propriety of adopting measures by which its production may be increased by artificial means.

"A list of the plants collected at Fort Garry and along the route, with their localities, and critical remarks on the more interesting and obscure species, will be published in the Society's Transactions."

TODMORDEN BOTANICAL SOCIETY.

Monday evening last, the 6th of May, was the time appointed to celebrate the anniversary of this flourishing Society; and at half-past six, about forty-four sat down to dinner, and Mr. A.

Stansfield, Sen., the worthy President of the Society took the chair.

We have much pleasure in again reporting to the readers of the 'Phytologist,' the increasing prosperity of this excellent association. The following abstract or summary of their proceedings will, it may be confidently asserted, afford much gratification, not to botanists merely, but to all who are interested in the progress of humanity in the ways of peace and charity.

"Although, during the year, we have lost through death, removal from the neighbourhood, and other causes, as many as ten members, yet, with new-comers, the total number at present on our books exceeds a hundred and fifty.

"Of books our library contains 330 volumes, purchased at a cost of from £150 to £200.

"During the year, 700 volumes of books have been issued to members, some of whom, as you are aware, living at a distance, have the privilege of keeping books for three months; a circumstance which ought to be taken into consideration in any estimate of the working of our Society, as drawn from the number of books circulated.

"As usual, there have been many Excursions made during the year. Of such of these excursions as our excellent Annalist may have attended, he will no doubt have preserved a faithful record, which he will have the pleasure of reading to you this evening.

"Mr. Patman is a gentleman who grudges no labour in behalf of the Society; and this spirit of disinterestedness is the general characteristic of our members, to which may be attributed the flourishing condition of our financial affairs.

"Among the more notable features of the botanical campaign of last season, may be instanced the discovery of the very remarkable *Lastrea montana* (or *Oreopteris*) *Nowelliana*, so named in merited honour of our amiable and much respected Vice-President. This extraordinary variety of the fragrant *Mountain Buckler-Fern*, which was discovered by Messrs. Nowell and Stansfield whilst on a botanical ramble in North Wales last summer, is the more notable as so very few deviations have been found hitherto, from the normal type of this beautiful Fern.

"Our eminent Muscologists, Mr. Nowell and Dr. Wood, of Manchester, have also had recently such success in their specialty as has startled the whole Muscological world. I refer to the

'new light' thrown by the above gentlemen on the genus *Orthotrichum*, in regard to which discoveries, as our botanical journals will have made patent to you, not only English but *foreign pens* have been at work.

"The various commendatory notices of our Society that have appeared, from time to time, in the pages of the London journals, and especially the 'Phytologist,' must also be another source of congratulation.

"For the large gratuitous contributions of dried specimens of plants made to the Society during the year, we owe much gratitude to the donors. Dr. Wood, of Manchester, and H. Boswell, Esq., of Oxford, in especial, have presented to the Society what must be considered most valuable acquisitions, in enlargement of our *hortus siccus*.

"The Editor of the 'Phytologist' having resolved to publish a List of all the Botanists (properly so called) in the kingdom, some time ago appointed your Secretary to report for Lancashire and Yorkshire, etc., and much correspondence, of course, has been necessary. The List of Botanists above referred to, is now in course of publication, and will no doubt shortly be in our hands.

"As to the matter of finance, we have some £30 of uncollected subscriptions, and a balance in hand which will almost cover all the outstanding accounts."

After carefully reading the foregoing Report, it would be both stingy and uncourteous to refrain from offering these persevering men the humble meed of approbation at our disposal; and to wish, in Oriental phraseology, as the author of 'Haji Baba' taught us long ago, "that their success may never be less." Their financial statement affords a most favourable contrast with the monetary accounts of more than one Society in which we formerly took an active part.

We only wish we had room for a more detailed account of the interesting proceedings of the evening. Probably when the Annalist publishes or prints his history of the past year's excursions, he will be so obliging as to send us a copy, from which we are certain of gleaning some facts which will be both instructive and pleasing to our readers. It is also a gratification to hear that the Darwinian theory is exciting considerable attention, and that

it can be discussed with interest and animation. It is fervently to be hoped and desired that these discussions are not sheer *logomachies*, rather disputes about words than about realities. For our own part we would rather hear or read Mr. Patman's notice of new localities for rare plants, than peruse the most ingenious speculations about their origin. The former are what people call *facts*, the latter are only fancies.

This brief notice of an exceedingly well managed and economical Society, is published in our pages solely for the purpose of showing how much good may be accomplished by a very small pecuniary expenditure. The example of the office-bearers especially deserves to be commended and imitated; the members get their *quid pro quo*, *i. e.* the full value of their contributions, six shillings *per annum*; the officials get a barren vote of thanks for their meritorious services. They are not mercenaries, nor vendors of scientific information.

We have dwelt longer than is our wont on this subject, not indeed for the sake of eulogizing these good men, but in the confident expectation that, following in their steps, similar societies, supported at small cost, say by annual payments of five shillings, will be established in every town or even populous parish in England. This is advocated and urged on botanists, wherever two or three can associate, not so much for the sake of science, as with the ulterior and higher object of making people more intelligent, more liberal, and more charitable. In the serious business of life, botany, like every other science, is only one of the means employed for the attainment of noble ends; and these are to make mankind better and consequently happier.

WORCESTERSHIRE NATURALISTS' CLUB.

The first meeting of this Club of practical observers was held on Wednesday last, the 15th of May, 1861, at Malvern, when a large number of members responded to the hospitable invitation of Dr. Grindrod to breakfast with him at Townsend House. After breakfast, the officers of the Club for the ensuing year were elected as follows:—The Rev. David Melville, Rector of Great Witley, President; Rev. A. H. Winnington Ingram, F.G.S., and Edwin Lees, Esq., F.L.S., Vice-Presidents; and

William Matthews, Esq., A.M., F.G.S., Hon. Secretary. Dr. Grindrod then exhibited his unique collection of Silurian fossils.

The botanists detected the rare Burnet (*Poterium muricatum*) and then made a traverse to Brockhill Wood, whose tangled mazes it was found difficult to emerge from, and here some of the heavier-weighted naturalists were "thrown out." Those who were enabled to break through the briars soon found themselves in the romantic Purlieu Lane, a place of double interest, botanical and geological, and while a select few ferreted out the habitat of the rare *Gagea lutea*, others were fishing specimens of *Batrachospermum* out of the brook.

Several new members were elected, viz. the Rev. W. Lister Isaac, Pirton Rectory; George Dawson, Esq., Birmingham; Mr. Jacob Gill, Cradley; etc.

Review.

The Preston Chronicle and Lancashire Advertiser, for Saturday, May the 11th, 1861.

The readers of the Chronicle are again (see 'Phytologist,' vol. v. 1861, p. 155) treated to another instalment of the botanical, antiquarian, and historical 'Rambles by the Ribble,' and this portion of the series is entitled, 'Ingleborough, Geerstones, Ribblehead, Ingleborough Cave,' etc., and it is just as chatty and pleasant as the previous papers on the same subject; and this is high praise.

The botanical discoveries were not numerous, many plants were not to be expected in a very ungenial spring like the last—probably worse. The party were fain to cower under rocks and dry stone dikes and cairns, to shelter themselves from the merciless storms of hail and sleety rain, which prevail more or less in these parts till St. Barnaby's day, June 11th. Three kinds of Club-Moss were all the rewards they obtained in the field of botanical acquisitions. Few of our readers need to be told what they were, for they are no rarities on the Yorkshire hills.

"A contented mind is a continual feast;" a truth which is amply established by these ardent plant- and cave-hunters; and they exercise the rare gift of making the most of everything, both plants and space. The top of Ingleborough, or Foalfoot, as

the people there call it, is a lofty rock forming the summit or crest of the hill. Queer names Englanders employ! there is a deep hollow near Dudley, barely a mile from the town, which is called the Wren's Nest. The summit of the Foalfoot is called "a vast expanse of table-land, not much less than a mile in circumference." When we were there, our companion told us that it had been a race-course; but the single round made, in racing phrase, only a short heat.

About the Ribble, which is hereabout but a tiny brook, the botanists collected *Trollius europæus*, *Primula farinosa*, one of the most elegant of the Primrose tribe; also *Pinguicula vulgaris*, the marsh Valerian; *Saxifraga granulata*, and *S. tridactylites*.

A few weeks in summer might be very pleasantly and profitably passed in rambling among these Yorkshire gills, climbing the hills, enjoying the extensive prospects, and now and then plucking a plant and floweret as a memento of the place and period. It is not agreeable to be on Ingleborough, or even at its foot, when the snow covers and conceals every blade of grass, every hedge, and every tree. May is an uncertain month; bitter cold has been the weather this season, 1861. The end of July, or the beginning of August, is the botanical season for Ingleborough; and for fine weather's sake, so conducive to personal enjoyment of fine scenery, and irrespective of herborizing purposes, we should prefer the end of August, or the beginning of September, when the temperature is more equable, and the atmospheric changes less sudden and severe. We wish our lively chatty tourists better weather the next time they go to Ingleborough; and like John Gilpin's poetic historian, we wish that "when they next set out to *walk*, may we be there to see."

BOTANICAL NOTES, NOTICES, AND QUERIES.

Cumbrian Botany.

Having occasionally wandered over the interesting district so correctly described by Mr. Edwin Green in your March number of the present year, I feel some pleasure in being able to add a few names of plants by no means common here, to be found within the limits he points out; and which appear to have escaped his notice.

Euphorbia portlandica grows sparingly along the Drigg shore, between the ordinary high-water mark and the high spring-tide mark; and *E. Pa-*

ralias near Haverigg. I could show Mr. Green a flourishing plant of *E. amygdaloides*, but it is not a native of the northern counties, and may therefore be less interesting to him. *Typha* (apparently) *latifolia*, less robust than I expected, was brought to me a few years ago, and said to have been gathered in the Chapel Sucken ditches (pools, or poo's, provincially), and most probably may still be found there.

On referring to Mr. Green's route in the November number, 1859, I find he examined the line of road between Seascale and Drigg, but has not recorded the *Lycopus europæus* which grows along the sides of that road, as well as in a few other Cumbrian localities.

At the edges of the copses between Thwaites Schools and the river Duddon I have observed the *Helleborus viridis*, in scattered patches. *Lithospermum maritimum* grows here and there along the shore, but not abundantly, for some distance; and on the muddy margin of the estuary of the Esk the *Artemisia gallica* flourishes.

A few years ago I noticed the *Inula dysenterica* growing in a hollow near the southern end of St. Bee's heads; but I fear the encroachments of the sea at that point have swept away the whole of the roots, as well as an acre or two of very valuable land where it grew.

Other Cumbrian plants and their localities I have mentioned in Martineau's 'Guide to the Lakes,' edition 1861.

Workington, March 18, 1861. W. DICKINSON.

[*E. Paralias* is in 'Cybele' placed among those species which are supposed to belong rather to the west than to the east of England. One of the proofs of its belonging to the assumed Atlantic type, is rather a *hobbling* supporter of this assumption, viz., Coast of Suffolk (Rev. W. Notcutt ! !).—'Cybele,' vol. ii. p. 362.

Its European range is not limited to the western shores of our quarter of the world, for it extends to Greece and Turkey; as it grows on the east of England, though not so commonly as on the west. So it grows on the maritime parts of our continent, from the Atlantic to the Adriatic.]

FERTILIZATION OF BRITISH ORCHIDS BY INSECT AGENCY.

(*From the Gardeners' Chronicle, Jan.* 26, 1861.)

Referring to your number for June 9, 1860, p. 528, Mr. Darwin asks for information on this point from persons residing in an Orchis district. It is not as a person answering that description that I venture to reply to his inquiries, because, with the exception of *O. Morio*, rarely *O. mascula*, and most rarely *O. viridis*, and *Listera ovata*, we have none of the British Orchids growing near Ely. In the spring of 1860, I met by accident a poor fellow in a street near Hungerford Market, who, for the important sum of sixpence, sold me fifteen roots of the Fly Orchis (*Ophrys muscifera*), which he had collected near Guildford, Surrey. I planted them in my garden, where they all flowered vigorously, bearing from seven to twelve flowers each. Not one of the seed-vessels swelled, and long after the flowers had withered, I narrowly inspected every one of them, and found the pollen-masses still in their pouches, waxy and moist, where one would have expected to find them shrivelled, like the flowers. I bought at the

same time several roots of the Butterfly Orchis, and one of *O. maculata*. The seed-vessels of the Butterfly Orchis in most instances swelled off, and I think every one upon the *O. maculata* was fertilized. I examined the latter frequently, and found the pollen-masses had been dislodged. If it had not been for the *O. maculata* growing with the rest, I might have referred the condition of the Fly Orchids to the absence of insects on account of the rainy weather, but as they all grew together and flowered at the same time (or nearly so), insects could as well get at the Flies as at the others. WM. MARSHALL.

Ely.

BARTRAMIA STRICTA, *Brid.*

This Moss, hitherto unknown to Britain, and found only in Spain and Portugal, etc., I found in March this year, at Maresfield, Sussex. From *B. pomiformis* this Moss may be known by its smaller habit, rigid and appressed leaves, never crisped, and the fruit-stalk is erect; the leaves also have aristate points. (I depend on Mr. Mitten's authority for the correctness of the species.) G. DAVIES.

HYPNUM DISPALATUM, *Wils. MSS.*,

Is a species I find near Lindfield, Sussex; it is recently separated by Mr. Wilson from *Hypnum hians*, Hedwig, a Sussex plant very near to *H. Swartzii*. Mr. Mitten is of opinion that the distinctions separating *H. dispalatum* from *H. hians* are scarcely sufficient to constitute a species. Search should be made by all bryologists, especially in the south of England, for fruited examples of these and allies, for at present there is much controversy about the *Eurynchium* section of *Hypnum*.

Idem, Brighton, April, 1861.

DEATH OF THE BOTANICAL GUIDE OF LLANBERIS ON SNOWDON.

Another of these sad accidents has just happened.* An old and celebrated guide, William Williams, left Llanberis at 10 a.m. on Thursday, to conduct a lady and gentleman up Snowdon, thence to descend on the Beddgelert side. Deceased was a noted botanist, and while his party rode slowly forward on ponies he indulged in his favourite science, rejoining them when he had obtained the plants. Arrived at the summit, he left them again in order to gather some Ferns, taking the direction of Capel Curig, when his foot must have slipped, and he was precipitated down a declivity of 300 yards. The party, after waiting an hour and a half, descended to Beddgelert, and thence wrote to Mr. Williams, of the Victoria Hotel, Llanberis; but owing to the guide's non-appearance scouts had already been sent out, and the body was found lying at the foot of the precipice. Crowds of persons attended his remains to the grave.—*From the 'Times' of June* 25, 1861.

An account of the death of Dr. Andrew Sinclair, F.L.S., while engaged in a botanical expedition in New Zealand, has reached us, particulars of which sad occurrence shall be given in our next number, if possible.

* Thursday, the 13th June last; see 'Morning Chronicle,' June 20th, 1861.

PALM. (*Salix cinerea, Grey Sallow.*)

This tree, in some parts of Kent, is called by the common people *Palm*, which on hearing led me to consider why it was so called. I thought as it came so early into bloom, or catkins, the branches might have been used by the early Christians to symbolize *Palm Sunday*, the anniversary of the day on which our Saviour entered Jerusalem, and was met by a multitude of people bearing branches of Palms and singing "Osanna in excelsis." Palm Sunday is the sixth Sunday in Lent, and the next before Easter, and I think this Willow is the most conspicuous of our trees which shows the earliest indications of spring by its foliage and bloom. I should like to know if this tree is called *Palm* in other parts of England.

I find, on referring to the 'Glossary of Dates, Charters, and Customs of the Middle Ages,' by R. T. Hampson, under *Palm Sunday*, the following interesting note taken from the Cott. MS. Claud. A ii. fo. 52. The old sermon for 'Dominica in Ramis Palmarum' has the following account of the day:—"Gode Cryston men and women, ze know welle all this day is calde Palme Sonnenday: than wyste Ihu tha hist passion was negh, and tooke Lazar w^{t} him, and so ryding on asse hi zode towerde Jeruslem, and whanne the pepul herdun that alle zode azennes him, bothe for wondur of the man that was reysed from deth to lyve, and also for to done Cryste worchep, wherfore many haddon flowres in his way, and many brokon braunches of olyfe and of palme and keston in the way, and spreddon clothus in the way, mixing melody and sungynge thus: Blessed be thu, etc.; but for encheson we have non olyfe that beroth grene leves, we takon in stede of hit *hew* and *palmes wyth*, and beroth aboute in process, and so this day we callyn *Palme Sonnenday*."

I think we may read *palmes wyth*, for *withy*, which is one of the names of the Willow, and *hew* is of course our *yew*.

I expect that some of your readers will be able to inform me when this ceremony of strewing branches by the early churches commenced, and when it was discontinued.

S. BEISLY.

Communications have been received from

James Lothian; John Sim; Sidney Beisley; E. J. Ashfield; Tom Stansfield; W. Pamplin; W. Richardson, jun.; J. R. A. Briggs; F. Y. Brocas; W. Winter; Richard Smith; Archibald Jerdon; J. S. M.; John Lloyd; G. Frost; F. Reynolds.

BOOKS, &c., RECEIVED FOR REVIEW.

The Chemist and Druggist, May 15th.
Notes on Books.
The Perth Reporter, May 25th.
The Preston Chronicle, May 29th.
Jackson's Oxford Journal, May 18th.
The Chemist and Druggist, June 15th.
The Lyttelton Times (New Zealand), April 3rd, 1861.

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